

REMARKS

Applicants thank the Examiner for the courtesy of a telephonic interview on November 13, 2007. Applicants' representatives Robert M. Bain and Mark Pitchford discussed the invention and the cited references in general with Examiner Nicole Young and Primary Examiner Christian Laforgia. In particular, Applicants discussed claim 1 and the Bruton (U.S. Patent Publication No. 2003/0145225) and Brock (U.S. Patent Application Publication No. 2003/0009693) references. No demonstration was given, no agreement was reached, and no exhibit was shown.

Applicants have thoroughly considered the Examiner's remarks in the August 10, 2007 Office action and have amended the application to more clearly set forth aspects of the invention. This Amendment A amends claims 1, 8, 9, 14-16, 20-22, 26, 29, and 33-40 and cancels claims 4 and 25. Claims 1-3, 5-24, and 26-40 are thus presented in the application for further examination. Reconsideration of the application as amended and in view of the following remarks is respectfully requested.

Applicants acknowledge the Examiner's acceptance of the drawings as originally filed.

At page 2 of the Office action, the Examiner indicates that the phrase "means for" appears within claims 25 and 32 and considers 35 U.S.C. § 112 paragraph 6 to be invoked. Claim 25 has been canceled. Applicants acknowledge that the "means for" language appears in claim 32 and that the cited section of the U.S.C. is therefore invoked with respect to claim 32.

Applicants note that the paragraph numbers in the Application as published (U.S. Publication No. 2005/0216955) do not match the paragraph numbers in the Application as filed. For purposes of discussion in this Amendment A, all paragraph numbers cited herein refer to the paragraph numbers in the Application as published.

No New Matter

Subject matter originally presented in claim 4 has been included in independent claims 1, 16, 26, and 33 by this Amendment A. This subject matter is discussed in the Application, for example, at paragraphs [0036]-[0037]. No new matter is presented herein since the subject matter appeared in the claims as originally presented.

Claim Objections

Claims 14, 20, and 40 stand objected to due to informalities. These claims have been amended as suggested by the Examiner and Applicants therefore respectfully request that the Examiner remove the objections.

Claim Rejections Under 35 U.S.C. § 101

Claims 1-40 stand rejected under 35 U.S.C. § 101 as being directed to nonstatutory subject matter for not providing a tangible result. Independent claims 1, 16, 26, and 33 as amended provide a tangible result and therefore are directed to statutory subject matter. Claims 2-15, 17-24, 27-32, and 34-40 depend from these claims and therefore also provide a tangible result. Each rejection is addressed in turn below.

Claims 1, 16, 26, and 33 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter for not producing a tangible result. Embodiments of the invention involve at least a computer-implemented method or apparatus for detecting an attack on an authentication service. In this regard, the claims recite specific tangible elements that produce a detection of such an attack, which is a useful, concrete, and tangible result. Claims 1, 16, 26, and 33 have been amended to generally recite that an attack is detected in response to determining that the identified request indicating the characterized attack. Applicants submit that this is indeed a tangible result of the computer-implemented method of claim 1 as well as the computerized systems of claims 16 and 26 and the computer-readable storage media of claim 33. As such, Applicants respectfully request that the Examiner withdraw the rejection.

Claims 8-10, 21, 22, 25, 29, and 36-38 stand rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter for not including a tangible result. Claim 25 has been canceled, and claims 8-9, 21-22, and 36-38 have been amended accordingly. All of these claims depend from independent claims that produce tangible results and are therefore directed to statutory subject matter. Claim 10 depends from claim 9, which provides a tangible result as explained above with respect to claim 1. Thus, claim 10 also includes a tangible result such that it is directed to statutory subject matter. Applicants respectfully request that the Examiner withdraw the rejection.

Claims 25 and 32 stand rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. Claim 25 has been canceled. Applicants respectfully submit that systems,

processors, and computer readable media storing computer executable instructions for implementing the claimed "means for determining if the stored data associated with one or more of the plurality of the requests matches the predefined pattern" are described in the Application as filed. For example, see the Application at paragraphs [0065]-[0078] and claims 16 and 33. In other words, the present Application does set forth specific hardware components in the specification. Therefore, Applicants respectfully request that the Examiner withdraw the rejection.

Claims 15 and 33-40 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. These claims have been amended to recite a computer readable **storage** media. In other words, the present Application does not merely set forth a non-functional computer listing on a sheet of paper. Applicants submit that these claims are therefore directed to tangible subject matter and respectfully request that the Examiner withdraw the rejection.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-3, 5, 8-10, 13-17, 20-22, 25-27, 29, 30, 32-34, 36-38, and 40 stand rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent Application Publication No. 2003/0145225 by Bruton, III et al. (hereinafter Bruton). Applicants respectfully submit that the cited reference fails to teach each and every element of the invention as claimed.

Bruton teaches an intrusion detection system (IDS) that is incorporated at multiple layers within a host computer. The IDS includes packet sniffing and scanning technology (see Bruton at paragraphs [0046]-[0052]). The IDS creates a log of received data packets and checks the log for attack signatures in order to determine an intrusion attack (see, for example, Bruton at paragraph [0060]). Bruton logs packets received at a host regardless of the contents of the packets. Bruton fails to teach redacting a password of a request from a memory if the request is successful.

In contrast, aspects of the present invention include employing discretion when logging authentication and/or logon requests. When a server receives a request, the server (or a cooperating group of servers) determines whether the request is successful (e.g., whether the request contains a corresponding account and password) and only logs a password associated with the request if the request is unsuccessful. This is beneficial in authentication and logon system architectures because it is undesirable to create additional lists of valid logon or

authentication data. To record successful authentication information, such as valid passwords, as taught by Bruton creates additional targets for attack (e.g., hacking) (see Application at paragraphs [0009]-[0010], [0028]-[0031], and [0036]-[0037]). That is, it is desirable to minimize the number of resources storing valid authentication and/or logon data in order to minimize the risk of a successful attack. To this end, claim 1 recites, "storing data relating to a plurality of requests communicated to an authentication service from a plurality of user agents via a data communication network, said requests each including a password, and wherein storing the data relating to the requests comprises **storing the password of each of the requests only if the request is unsuccessful....**" Claim 16 recites, "a first memory area to store data relating to a plurality of requests communicated to an authentication service from a plurality of user agents via a data communication network, said data being stored in the first memory area as a log of the authentication service, wherein each of the plurality of requests communicated to the authentication service includes a password and wherein the stored data contains **the password of each of the requests only if the request is unsuccessful....**"

Claim 26 is directed to user authentication system that receives authentication requests from a plurality of user agents. According to this claim, "a first memory area [stores] data relating to a plurality of **unsuccessful** requests . . . wherein the stored data includes **the password of each of the unsuccessful requests and does not include the password of any successful requests**" The storage media of claim 33 comprises "a memory component to store data relating to a plurality of unsuccessful requests communicated to the authentication service from the plurality of user agents, wherein the stored data includes **the password of each of the unsuccessful requests communicated to the authentication service and does not include the password of any successful requests**"

In each of these independent claims, Applicants further recite comparing the stored data to a predefined pattern for characterizing an attack on the authentication system based on the stored passwords. Bruton merely shows indiscriminately storing data and, thus, fails to teach each and every aspect of the invention as claimed, including the logging of passwords used in **unsuccessful** requests. None of the cited references cure these defects. Applicants submit that claims 1, 16, 26, and 33 are therefore allowable over the cited art. Claims 2-3, 5-15, 17-24, 27-32, and 34-40 depend from these claims and are allowable over the cited art for at least the same reasons. Applicant therefore requests that the Examiner withdraw the rejection of these claims.

Claim Rejections Under 35 U.S.C. § 103

Claims 4, 6, 7, 18-19, 28, and 35 stand rejected under 35 U.S.C. § 103 as being unpatentable over Bruton in view of U.S. Patent Application Publication No. 2003/0009693 by Brock et al. (hereinafter Brock). Claim 4 has been canceled. Claims 6-7 depend from claim 1 and are allowable over the cited art for at least the same reasons as claim 1 as explained above. Claims 18-19 depend from claim 16 and are allowable over the cited art for at least the same reasons as claim 16 as explained above. Claim 28 depends from claim 26 and is allowable over the cited art for at least the same reasons as claim 26 as explained above. Claim 35 depends from claim 33 and is allowable over the cited art for at least the same reasons as claim 33 as explained above.

Additionally, with respect to the subject matter of claim 4, at pages 8-9 of the Office action, the Examiner asserts that Bruton at paragraph [0004] teaches that the number of logon attempts is counted and compared against a threshold of events. Assuming that the Examiner is referring to Brock at paragraph [0004], Brock discloses counting logon failures and suspecting an intrusion if the number of failures exceeds a threshold over a given period of time. The cited portion of Brock does not disclose storing a password relating to a request at all, much less only storing the password if the request is unsuccessful. As explained above with respect to claims 1, 16, 26, and 33, Bruton also fails to teach storing a password only if a request is unsuccessful. Thus, neither Brock nor Bruton teach the subject matter of claim 4 and the independent claims incorporating this subject matter are therefore allowable over the cited references.

Claims 11-12, 23-24, 31, and 39 stand rejected under 35 U.S.C. § 103 as being unpatentable over Bruton in view of U.S. Patent Application Publication No. 2002/0097145 by Tumey et al. (hereinafter Tumey). Claims 11-12 depend from claim 1 and are allowable for at least the same reasons as claim 1 as explained above. Claims 23-24 and 31 depend from claim 16 and are allowable for at least the same reasons as claim 16 as explained above. Claim 39 depends from claim 33 and is allowable for at least the same reasons as claim 33 as explained above.

Conclusion

Applicants submit that the claims are allowable for at least the reasons set forth herein. Applicants thus respectfully submit that claims 1-3, 5-24, and 26-40 as presented are in condition for allowance and respectfully request favorable reconsideration of this application.

Although the prior art made of record and not relied upon may be considered pertinent to the disclosure, none of these references anticipates or makes obvious the recited aspects of the invention. The fact that Applicants may not have specifically traversed any particular assertion by the Office should not be construed as indicating Applicants' agreement therewith.

Applicants wish to expedite prosecution of this application. If the Examiner deems the application to not be in condition for allowance, the Examiner is invited and encouraged to telephone the undersigned to discuss making an Examiner's amendment to place the application in condition for allowance.

The Commissioner is hereby authorized to charge any deficiency or overpayment of any required fee during the entire pendency of this application to Deposit Account No. 19-1345.

Respectfully submitted,

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